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ABSTRACT

This report documents the relationship between the supply of reliable, affordable, accessible child care and the health of Vermont's economy. The child care industry is a growing part of the Vermont economy, pumping money into local communities by supporting working families, creating jobs, and generating taxes through employment and the purchase of goods and services. As the number of two-wage earner families and women-headed households increases, child care becomes an essential social infrastructure, enabling parents to enter and remain in the workforce. An insufficient supply of reliable, affordable, and accessible child care negatively impacts Vermont's economy. Parents without such child care are less likely to enter the workforce, be productive at work, and remain employed. These problems are particularly acute for parents working in the retail and service industries, which are defined by lower wages and nontraditional, mixed, and weekend shifts. There is a steadily growing body of scientific evidence that the quality of children's social and environmental experience lays the groundwork for future success in school and life. Consistency of care is a determining factor in high-quality care and learning programs, yet the high turnover rate among caregivers is due in large part to low wages and poor benefits. For many small businesses in Vermont, publicly-funded child care is essential. Many Vermont business do not pay wages that are high enough to cover child care costs. By helping low-wage families pay for child care, Vermont is also providing financial assistance to thousands of small businesses in the state. (Contains 37 endnotes and 5 notes explaining methods used to calculate the statistics presented in the report.) (KB)

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The Economic Impact *of* Vermont's Child Care Industry

June 2002

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We are indebted to the National Economic Development and Law Center of Oakland, California, for its 1998 report entitled: *The Economic Impact of the Child Care Industry in Alameda County.*

Note: Throughout this report we use the term "child care" as shorthand for "early care and education." Our methodology includes data on Vermont children aged birth through 11 years old. We use the term "provider" to refer to an individual working in a child care center or family child care home. When referring specifically to individuals who run a child care program from their home, we use the term "family child care provider.

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Table of Contents

Introduction.....1

Child Care Contributes to the Economy.....1

Child Care Enables People to Work.....3

Insufficient Supply of Child Care
Impacts Economic Growth.....3

The Quality of Child Care
Affects the Future Workforce.....6

Low-Wage Working Parents Require Child Care Subsidies
to Enter and Stay in the Workforce.....7

Conclusion.....9

End Notes.....10

Methodological Notes.....11

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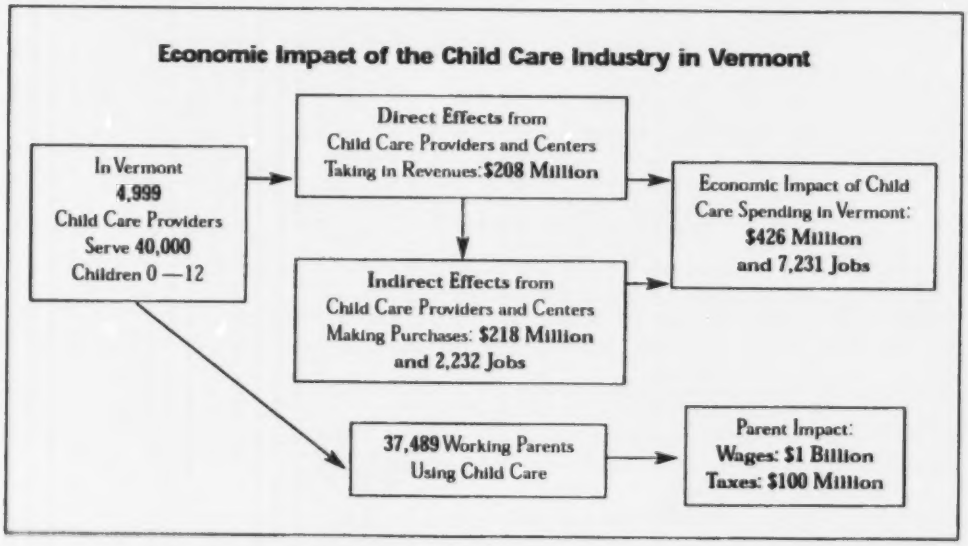
Introduction

We all know there is a crisis in child care. Increasing numbers of women with young children have entered the workforce while the supply of child care has remained static. To date there has been little information linking child care resources to the economy. This report fills that gap by providing documentation of the relationship between the insufficient supply of reliable, affordable, accessible child care and the health of Vermont's economy. It is clear that child care is a problem belonging to all players on the economic stage, not just to individual working parents.

The report that follows illustrates how investments in the child care infrastructure, like investments in the infrastructures of transportation, public works, affordable housing and higher education, can have direct, positive effects on the ability of Vermont's economy to experience growth and vitality.

This report is the first step in integrating child care planning into local, regional and state economic development plans. It calls for economic developers, businesspeople, planners and public officials to collaborate with child care specialists so that we all make sound decisions that strengthen the State's economy and ensure the well-being of Vermont's children.



Child Care Contributes to the Economy

Vermont's child care industry contributes directly and indirectly to the state's economy. The industry not only directly supports child care jobs and the jobs of the parents who rely on child care, but also jobs supported by the goods and services that child care providers procure.

- There are at least 7,231 jobs in Vermont as a result of child care: 4,999 direct child care jobs (not including unregulated providers[1]) plus 2,232 indirect jobs.[2]
- Most licensed child care centers and registered family child care homes are small businesses, but their aggregate employment is substantial. With 4,999 registered child care workers and self-employed family child care providers, the child care industry has more workers than some high-profile sectors like food processing, public utilities and communications (see Figure 1).
- If all child care providers worked for one employer, it would be larger than Fletcher Allen, IDX or C & S Wholesalers, three of the largest employers in the state.
- For every $1 million spent on child care, 35 jobs are created (24 direct, 11 indirect).[3]
- We estimate that there are 37,489 working parents who rely on child care services and are employed by over 11,000 Vermont businesses. (see Methodological Notes)

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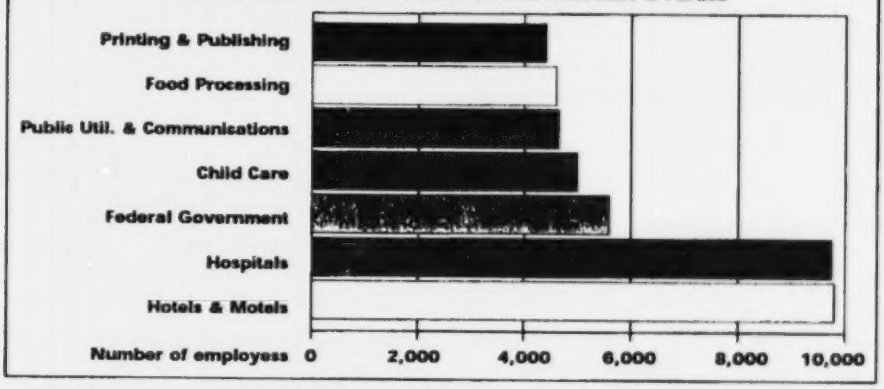
Figure 1

The Child Care Industry is a Large Employer

Source: VT DET; Childcare estimate derived from Mills & Pardee



The economy benefits from the earnings and taxes of the child care workers and of the workers supported by the child care industry. Clearly, the child care industry is a critical component of economic development in the state.

- We estimate that the total annual earnings for all regulated child care providers is $72.5 million. Total annual child care earnings, including unregulated child care providers, is approximately $120 million.[4]

- We estimate that one out of every nine Vermonters in the labor force (37,489) has a child under 12 in child care. Together, these working parents earn over $1 billion annually, or 13% of total wages in Vermont, and pay about $100 million in state and federal income taxes. (see Methodological Notes)

- With almost 40,000 children under age 12 in child care,[5] the total amount spent for child care in Vermont from all sources is about $208 million per year (see Methodological Notes). These funds are called direct expenditures.

- The total economic impact of the child care industry in Vermont is estimated to be almost half a billion dollars annually: $208 million in direct expenditures and an additional $218 million in indirect spending.[6] (Indirect spending occurs when child care providers and centers purchase goods and services like paper products, furniture, utilities and cleaning supplies.) This represents 2.5% of Vermont's Gross State Product.

The economy also realizes long-term savings from investments in high-quality child care.

- A cost-benefit analysis of the High/Scope Perry Preschool study shows savings to the public of more than $7 for every $1 invested in high-quality child care per child.[7]

- Society realizes long-term savings in areas of crime, welfare, tax and schooling by investing in high-quality early care and learning programs.

Child Care Enables People to Work

ore and more families need two incomes to meet their basic needs. In 1998, 80.3% of Vermont women with children under the age of six were in the workforce-25% more than the U.S. average of 64.1%.[8] Child care is clearly an essential support mechanism for the labor market.

- Nationally, 61% of married couples with children under age six had both parents in the workforce in 2000.[9] In half of these couples, both parents worked full-time.[10]
- 73% of all single parents in the U.S. with children under age six were employed in 2000.[11] In Vermont, the 2000 Census found 14,792 households headed by a woman with a child under 18 (or 19% of all Vermont households with children under age 18).[12]
- An estimated half of all businesses in Vermont have employees with children in child care — 11,595 businesses (see Methodological Notes) (See Figure 2).

Figure 2

Estimated Distribution of Vermont Workers with Children Under12 in Child Care

Size of firm: # of employees	# of firms by size	# of workers w/children<12 in child care	% of firms w/workers w/children<12 in child care	# of firms w/workers w/children<12 in child care
< 5	12,766	3,213	25%	3,114
5 - 9	4,253	3,717	84%	3,591
10 - 19	2,581	4,410	100%	2,581
20 - 49	1,548	6,016	100%	1,548
50 - 99	449	3,906	100%	449
100 - 249	235	4,567	100%	235
250 - 499	52	2,488	100%	52
500 - 999	16	1,102	100%	16
1,000 +	8	2,047	100%	8
Totals	**21,908**	**31,467**	**53%**	**11,595**

- "An ancillary effect of the increase in women in the workforce is that it reduces the number of women (relatives/friends) who had previously been available for informal child care but who now work and can no longer provide such services."[13]
- For those families with two wage earners, the value of the second income is greatly diminished by child care expenses.[14] (see Figure 3,) This problem is exacerbated by the fact that so many women work in relatively low-wage jobs.[15] While child care enables people to work outside the home, a significant amount of the household income goes towards paying for child care. (See Figure 4).
- As a result of welfare reform, low-income single parents must be employed so child care is necessary.

Insufficient Supply of Regulated Child Care Impacts Economic Growth

n insufficient supply of reliable, affordable and accessible child care negatively impacts Vermont's economy. Parents who can't find or afford child care are less likely to enter the workforce, be productive at work, and remain employed. These problems are particularly acute for parents working in the retail and service industries — which comprise almost half of Vermont's total jobs, including a significant percentage of all low-wage jobs.

Figure 3

Est. Percentage of 2nd Wage Earner's Income Spent for Child Care

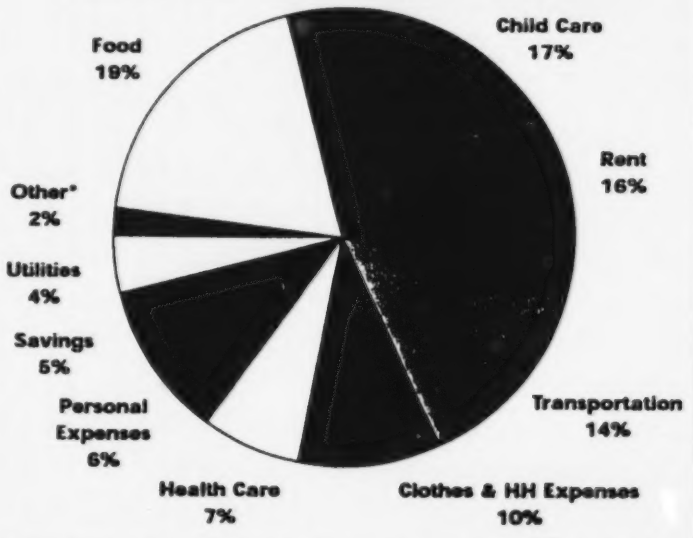
Annual total family income	$26,000	$30,000	$35,000	$40,000
Avg. hourly wage - each parent	$6.25	$7.21	$8.41	$9.62
Est. net income after taxes	24,747	26,639	30,172	33,852
Maximum annual child care subsidy	4,053	2,705	1,351	0
Out of pocket annual child care cost	**2,842**	**4,190**	**5,544**	**6,895**
Out of pocket - % of 2nd income	**22%**	**28%**	**32%**	**34%**
Effective hrly wage - 2nd income	**$4.88**	**$5.20**	**$5.75**	**$6.30**

Assumptions: Both parents work FT and have 2 children ages 4 & 6. Both parents earn the same wage and receive two weeks vacation and 10 paid holidays. Therefore, the 4-yr old requires FT child care for 240 days and the 6-yr old requires PT care during the school year (38 wks) and FT care during the summer (10 wks). We used the statewide average cost of care at a licensed center. Figures for state subsidies are from the CCSD.

Figure 4

Child Care as a Percentage of a Basic Needs Budget

(urban, two adults — both working — with two children)



Source: Joint Fiscal Office, Vermont Legislature

*Other includes insurance & phone

- A recent survey of employees in Windham County, VT reveals that problems with child care have negatively affected their work: 38% of respondents were forced to miss work; 24% were unable to work overtime; 21% believed it was harder to do a good job at work because of child care-related problems.[16]

- A recent New Hampshire report by the Governor's Business Commission on Child Care and Early Education stated that "the absence of reliable and affordable child care is a barrier for many employees entering the workforce, so businesses can benefit by investing in...child care — especially during periods of low unemployment."[17]

- This same report states: "Many companies...believe that there are substantial benefits from offering child care services: 62% of respondents reported higher morale, 54% reported reduced absenteeism, 52% reported increased productivity, and 37% reported lower turnover."[18]

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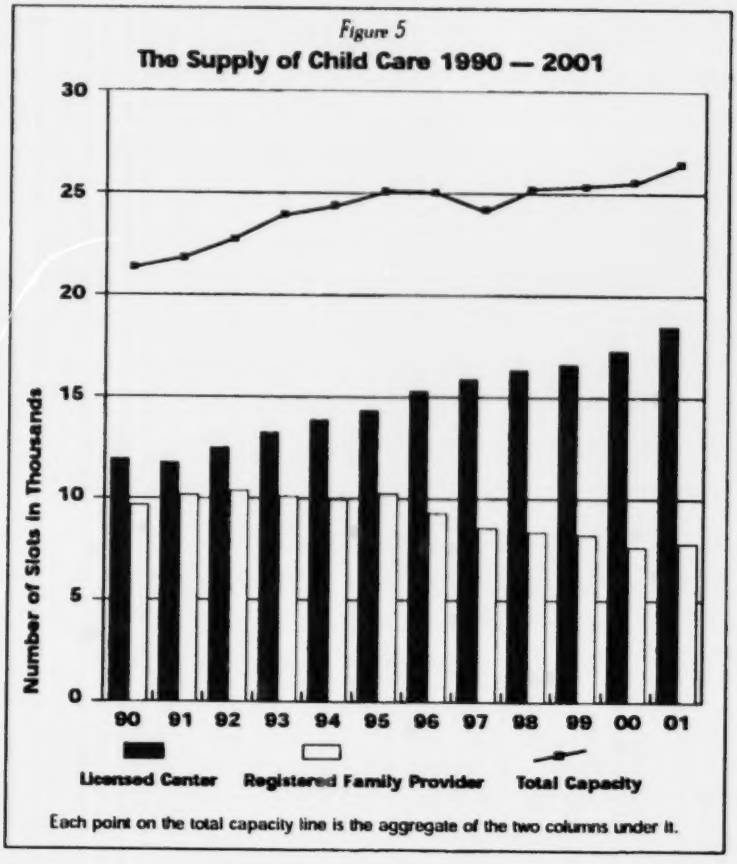
- New Hampshire businesses lose as much as $24 million a year becauseof child care-related absenteeism.[19] It is not surprising, therefore, that "the John Hancock Mutual Life Ins.Co. found that the estimated pay-back for every dollar invested in family-friendly policies was $4.17 (in employee time, retention, performance, and stress reduction/health care cost prevention)[20]

The existing regulated child care system is meeting only 65% of the estimated need.[21] The shortfall between the supply of existing regulated child care slots and the total estimated need for child care could be as high as 14,000 slots. Note: The Child Care Services Division (CCSD) estimates that the 26,000 licensed and registered child care slots are actually used by about 36,000 children since some part-time slots are used by more than one child.

- Demand for child care services has increased dramatically in the last few decades primarily as a result of the increase in the percentage of women in the labor force, welfare reform, more female-headed households, and more people working non-traditional hours and second jobs. The supply of child care, however, has not kept pace with the demand. The problem is evidenced by waiting lists for licensed care, which can be up to two years for infants.[22]

- Since 1990, the capacity of licensed child care centers in Vermont has grown 55%. In contrast, the number and capacity of registered family child care homes have declined by 24% since 1995.[23] As a result, total capacity has only increased 7% since 1995. The total number of licensed and regulated slots is now just over 26,000 (see Figure 5).

Figure 5



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- An insufficient supply of high-quality child care leads many working parents to use informal unregulated child care which is often unreliable. As noted above, we estimate there are almost 40,000 children under age 12 in child care in Vermont. Although the State Child Care Services Division does not have data on the number of children in unregulated, informal child care, CCSD staff believe that up to as many as 10,000 more children are cared for through these arrangements. No doubt some of these families are satisfied with informal, unregulated child care, but anecdotal evidence suggests that many would prefer regulated care if it were available, and if the price and quality were right.
- The shortage of regulated child care is especially acute for parents working non-standard hours, mixed shifts and weekends. According to Vermont's Child Care Services Division, only 17% of the state's licensed centers are open before 7:00am and only 3% are open after 6:00pm; 3% offer weekend or overnight care.[24]

The Quality of Child Care Affects the Future Workforce

usiness owners and economic development officials all agree on the importance of a well-educated workforce. There are many pieces to the puzzle, but we know that high-quality early learning improves the likelihood of success throughout a person's life. While the findings from the Abecedarian Project, the study of Chicago's Parent-Child Centers and the High/Scope Perry Preschool Study do not shed light on children's well-being throughout adulthood, the findings do underscore the positive foundation that high-quality early care and education lays in a child's life. The results of three well-known studies are compelling:

- In the Abecedarian Project, children who received enriched, high-quality early care and education had long-term gains in IQ, reading and math scores. [25]
- Children who participated in high-quality early learning programs in Chicago Child-Parent Centers were shown to have significantly higher math and reading scores, lower grade-retention rates, higher high school completion rates and significantly lower rates of juvenile arrests than children not in the program.[26]
- In the High/Scope Perry Preschool Study, those who had participated in high-quality child care programs were less likely, by age 27, to have been arrested, had mean monthly earnings almost double those of control-group members and were much less likely to be receiving public assistance.[27]

In order to maximize children's potential, we need to ensure high-quality early care and learning experiences for our children. A critical component of high-quality care is consistency of care. Unfortunately, due to low wages and no benefits, there is a high turnover among child care providers-reaching 40% nationally.[28]

- In Vermont, the median hourly wage for child care providers at licensed centers was $7.60 in 2000,[29] which is lower than that of short order cooks and stock clerks (see Figure 6).
- The Mills & Pardee survey found that "over half [of family child care providers] had a net income under $10,000." [30] Since they work more than 50 hrs/wk on average,[31] [the] effective hourly wage [for family child care providers] is below the minimum wage."
- According to a recent survey conducted for the Child Care Services Division by Mills & Pardee, almost two-thirds of all family child care providers receive health coverage through the VermontHealth Access Plan (VHAP), an income-sensitive public assistance program.[32]

Figure 6

Comparison of Child Care Workers' Wages

Occupation	Median Hourly Wage
Stock clerks	$8.29
Counter & retail clerks	$7.96
Short order cooks	$7.77
Child care workers	$7.60
Maids & housekeepers	$7.53
Food preparation workers	$7.26
Cashiers	$6.91

Source: DET 2000 OES

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Low-Wage Working Parents Require Public Child Care Subsidies to Enter and Stay in the Workforce

Vermont's economy depends heavily on lower-wage, service-sector jobs. Many parents working low wage jobs require child care subsidies to help them pay for child care.

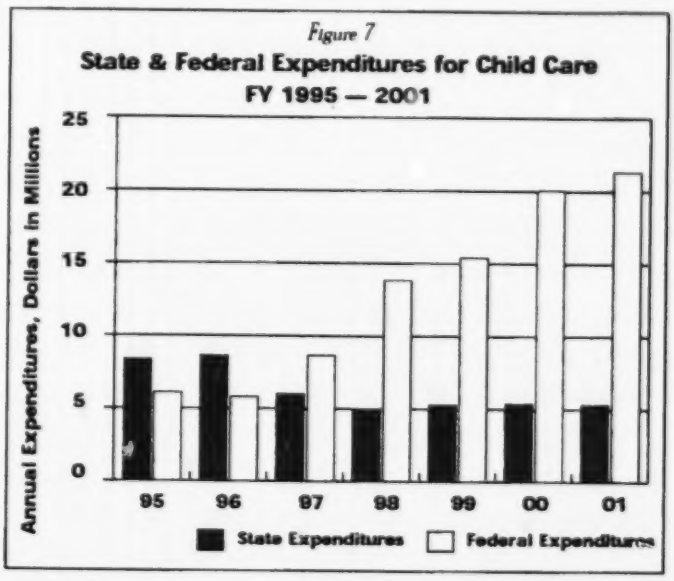
- In 2000, 48% of the state's jobs were in the retail and services industries, whose annual average wages of $16,558 and $26,623 respectively were well below the state's annual average wage of $28,920.[33]
- Estimates indicate that 45% of all Vermont job openings through 2008 will require nothing more than short-term on-the-job training — an indicator of low wages.[34]

Although government support for child care has expanded somewhat to help meet the growing demand, declining real wages (adjusted for inflation) have made the cost of child care a greater parental burden and forced more and more families to seek public assistance.

- Vermont's Child Care Services Division spent almost $27 million in FY 2000 on child care subsidies for low-income families. Adjusted for inflation, this was 58% higher than in FY 95.
- However, the State's contribution to child care has declined 38% since FY 96, as more federal funds became available (see Figure 7). Had the State maintained its former level of support, the Child Care Services Division could provide subsidies for 1,041 additional children or raise the subsidy, which is well below the market price.

Figure 7

State & Federal Expenditures for Child Care
FY 1995 — 2001

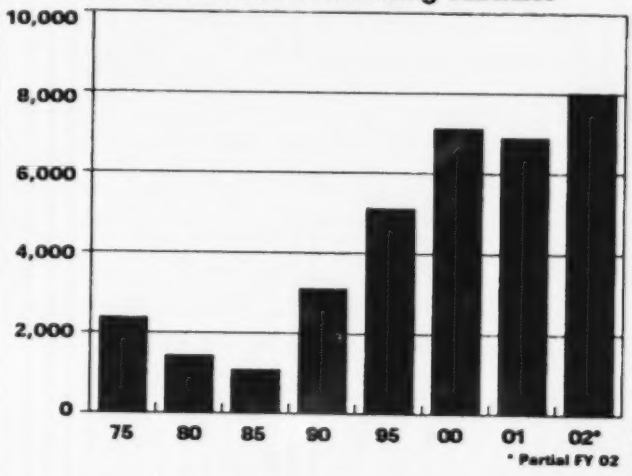


- The average subsidy per child was $3,157 in FY01, which was only 58% of the average market price ($5,487). Even with a subsidy, a family earning $28,000 with a four year old child in full-time care has a shortfall of between $130-$200 per month, depending on whether they use licensed centers or registered family child care homes.[35]

- In FY 01 there were 6,900 Vermont children receiving subsidies from the Child Care Services Division, a 190% increase since 1975. (see Figure 8). [Note: incomplete FY02 figures show a substantial increase up to 8,028 children receiving subsidies.]

Figure 8

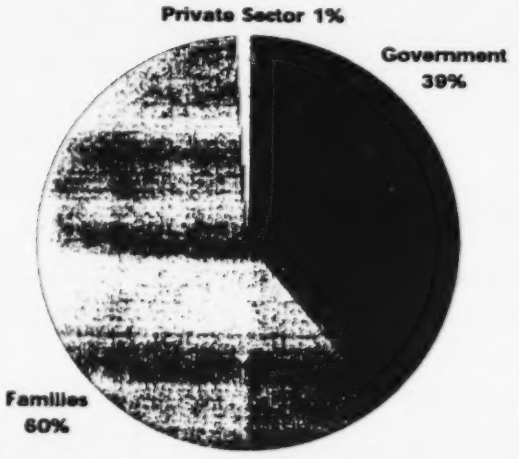
Number of Children Receiving Subsidies



Source: Vermont's Child Care Service Division

Figure 9

Major U.S. Revenue Sources for Child Care and Early Education 1993-4



Source: Financing Child Care in the United States: An Illustrative Catalog of Current Strategies

- As Figure 9 illustrates, families currently pay 60% of all the money spent nationally for child care.[36] In contrast, families pay only about 23% of the cost of a public college education because tuition and fees represent only a small portion of the total cost.[37] The private sector makes a much greater investment in higher education than in early care and education. The difference in the burden is especially note-worthy because families with young children in need of care are much less likely to have the necessary resources than when the children are older and ready for college.

Conclusion

The child care industry is a growing part of the Vermont economy — pumping money into local communities by supporting working families, creating jobs and generating taxes through employment and the purchase of goods and services. Money spent on child care stays in Vermont communities, helping children, families and local businesses.

As the number of two-wage-earner families and women-headed households has increased, child care has become an essential social infrastructure, enabling parents to enter and remain in the workforce. Reliable, affordable child care is critical to low-income families entering the workforce as a result of welfare reform and may make the difference between climbing out of poverty and falling deeper into it.

An insufficient supply of reliable, affordable, and accessible child care negatively impacts Vermont's economy. Parents who can't find child care, can't afford child care, or can't rely on child care arrangements are less likely to enter the workforce, be productive at work, and remain employed. These problems are particularly acute for parents working in the retail and services industries, which are defined by lower wages and non-traditional, mixed and weekend shifts. And it is these industries which comprise almost half of Vermont's total jobs.

There is a steadily growing body of scientific evidence that the quality of children's social and environmental experience lays the groundwork for future success in school and life. Consistency of care is a determinant factor in high-quality early care and learning programs. Yet, the national turnover rate among child care providers is 40% annually and is due, in large part, to low wages and poor benefits.

For many small businesses in Vermont, publicly-funded child care is essential. Many Vermont businesses do not pay wages that are high enough to cover the cost of child care. By helping low-wage families pay for child care, Vermont is also providing financial assistance to thousands of small businesses in the state.

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End Notes

1 "Regulated" child care is all non-parental, non-relative child care, including licensed centers and registered family child care providers regulated by the Child Care Services Division of the Vermont Agency of Human Services. They have met health and safety requirements of the State.

2 Businesses — child care providers included — buy goods and services. The economic impact of these purchases is referred to as the multiplier effect because the money circulates through the economy, multiplies, and creates jobs. For example, among other things, child care providers buy furniture, paper goods, food, utilities, and cleaning supplies. In addition, they buy the same services as any other business: transportation, banking, bookkeeping, and insurance. In doing so, they create demand for these goods and services and help create jobs. These are considered "indirect" jobs because they are not in the child care industry but are supported by it. Furthermore, the companies that provide these goods and services in turn buy goods and services and these expenditures also create demand and jobs. Finally, all of the workers involved pay taxes and spend their paychecks like everyone else. Together, these combined activities are referred to as "final demand" and can be estimated using "multipliers" from the U.S. Commerce Department. The Commerce Department multipliers provide an estimate of the number of indirect jobs created by child care spending.

Jobs Created in VT Due to Spending on Child Care

Industry	Jobs
Retail	308
Transportation	272
Business Services	256
Eating & Drinking	198
Farm Products	170
Health Services	156
Printing & Publishing	129
Wholesale	103
Hotels & Amusements	94
Banks & Brokers	67
Rubber, Plastics & Leather	64
Food Products	59
Personal Services	59
Communications	55
Construction	54
Real Estate	49
Insurance	34
Paper & Allied Products	19
Misc. Manufacturing	18
Electric, Gas & Sanitary	17
Apparel & Other Textiles	14
Lumber & Wood	11
Other*	26

Source-Commerce Dept. RIMS II multipliers

* Other includes electronic equip., fabricated metals, chemicals, indus. mach. & equip., textile mills, stone, clay & glass, etc.

3 Total expenditures = $208 million (40,000 children x avg. market cost of $5,487). Total jobs = 7,231. Thus, 7,231 jobs divided by 208 = 35 jobs per million spent.

4 The earnings of regulated child care providers ($72.5 million) was calculated thus: we extrapolated from the Child Care Services Division report by Mills & Pardee, *"Vermont Child Care: A Study of Wages, Credentials, Benefits and Market Rates"* July 2000, assuming 3,346 full-time workers and 1,653 part-time workers. We used DET's median hourly wage ($7.60) and a 30-hour week for part-time workers. There is no reliable data about the number and wages of unregulated child care providers but they are likely to be substantial. Indeed, anecdotal evidence suggests that the wages of some unregulated child care providers exceeds that of their regulated counterparts. Their wages were estimated in the following way: we estimated that 14,000 +/- children are in unregistered child care (40,000 children in child care — see methodological note #2 below — minus 26,000 state-regulated child care slots). 14,000 is 54% of the total number of children in registered child care (+/- 26,000). So 54% of $72.5 million is $39.15 million. Add $39.15 million and $72.5 million to get $111.65 million. We assume unregistered providers make a bit more than the avg. child care worker so we rounded up to $120 million.

5 See Methodology Notes, #2 for the derivation of this number. It includes children in both regulated and unregulated care. However, staff at the State Child Care Services Division believe this number is quite conservative. Although CCSD staff do not have data on the number of children in unregulated care, staff believe that up to as many as 10,000 more children are cared for through the unregulated system. Using CCSD estimates of the number of children in unregulated care would bring the total number of children in regulated and unregulated care up to 50,000.

6 We used multipliers supplied by the U.S. Commerce Department (RIMS II) for Vermont and adjusted for inflation to obtain this number. See endnote # 2 for discussion of indirect spending.

7 Barnett, W.X. 1993. Benefit-cost analysis of preschool education: Findings from a 25-year follow-up. American Journal of Ortho-psychiatry 63 (4): 25-50. The High/Scope Perry Pre-School Project (longitudinal study begun in 1962), High/Scope Educational Research Foundation.

8 "The State of Our Children, 2001 Data Book" The Vermont Children's Forum, 2001.

9 U.S. Census Bureau, Current Population Survey (CPS).

10 Bureau of Labor Statistics (BLS), Report on the American Workforce, 1999, p. 100.

11 BLS - In households with only one parent with a child under 6, 69% of women and 88% of men worked in 2000.

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12 2000, U.S. Census

13 From unreleased draft report for State Auditor on child care.

14 Ibid.

15 Women and Economic Development in Vermont: A Study for the Governor's Commission on Women, December 1993. See tables 3-C and 5-C in the Supplementary Tables (pp.5 & 8).

16 Child care needs assessment project conducted by the Windham Regional Commission, 2002, sponsored by the Children First Partnership.

17 Shapiro, Lisa, *New Hampshire Economy and Child Care Markets*, quoted in "New Hampshire's Child Care Challenge," The Governor's Business Commission on Child Care and Early Childhood Education, p. 7.

18 Ibid.

19 Ibid.

20 *"Investing in Child Care, Challenges Facing Working Parents, and the Private Sector Response"*, U.S. Department of the Treasury.

21 26,000 divided by 40,000 (number of regulated child care slots divided by estimated number of children needing child care).

22 Reported by staff of Child Care Resource, Williston, VT, a child care resource and referral agency. Anecdotal information from across the state report waiting lists for many child care programs.

23 All data on supply from the Child Care Services Division, SRS.

24 *Vermont Child Care: A Study of Wages, Credentials, Benefits and Market Rates*, Vermont Child Care Services Division, Agency of Human Services, July 2000.

25 *Early Learning, Later Success: The Abecedarian Study*, Frank Porter Graham Child Development Center, University of North Carolina at Chapel Hill, October 1999.

26 Reynolds, Arthur J.; Temple, Judy A.; Robertson, Dylan L.; and Mann, Emily A. (2001). "Long-Term Effects of an Early Childhood Intervention on Educational Achievement and Juvenile Arrest," Journal of the American Medical Association, vol. 285, no. 18, pp 2339-2346. Chicago, IL: American Medical Association.

27 The High/Scope Perry Pre-School Project (longitudinal study begun in 1962), High/Scope Educational Research Foundation.

28 Center for the Child Care Workforce, Whitebook et al., 1989 & 2001.

29 Vermont Department of Employment and Training, 2000.

30 *Vermont Child Care: A Study of Wages, Credentials, Benefits and Market Rates*, Mills & Pardee, July 2000.

31 Ibid.

32 Ibid.

33 VT Department of Employment and Training, Labor Market Information, Covered Employment and Wages, 2000.

34 VT DET, Occupational Employment & Wage Projections, 1998 - 2008.

35 Costs based on the average of rural and urban fees for both child care centers and family providers. Urban data (Chittenden Co.) from Child Care Resource and rural (rest of the state) from CCSD.

36 A. Mitchel, L. Stoney, and H. Dichter (1997). *"Financing Child Care in the United States: An Illustrative Catalog of Current Strategies"*, Ewing Marion Kauffman Foundation.

37 Ibid.

Methodological Notes

1 DET estimated that there were 1,580 "child care workers" and 740 "pre-school teachers" in the child care field in 2000 (total = 2,320). For several reasons, however, these figures underestimate the actual total. DET's occupational employment survey (OES) does not cover self-employment so family child care providers are not included. In addition, some centers employ additional staff that may be categorized by employers and DET as administrative assistants, cooks, or custodians even though they too may perform child care duties.
Fortunately, the Child Care Services Division funded a comprehensive survey of all child care providers last year. [*Vermont Child Care: A Study of Wages, Credentials, Benefits and Market Rates*, Mills & Pardee, July 2000] The response rate for the survey was exceptionally high and exceeded 70% of all licensed child care centers and registered family care providers. Mills & Pardee reported the following employment and self-employment figures:

- 2,442 employees of child care centers (responses from 375 centers - 71%)
- 936 family child care providers (responses from 72% of all providers)
- 20% of family child care providers reported having an assistant, which means there are approximately 187 additional workers.

Thus, Mills & Pardee found 3,565 people working in the field as either employees or sole proprietors. The actual figures are somewhat higher because less than 100% of centers and family providers responded to the survey. If we assume the profiles of the centers and family providers that did not respond are similar to those that did, the total number of workers and sole proprietors would be approximately 4,999 – more than twice the DET estimate.

2 The national percentage of households (HH) with children under 12= 24.722% (CPS 2000)
- VT HH with children <12 = 59,489 (24.722% x 240,634 VT HH, Census 2000)
- number of children in VT <12 = 86,944 (Dept. of Health, 1997)
- average number of children per HH with kids < 12 = 1.46 (86,944 ÷ 59,489)
- percentage of single parent HH in VT = 7.8% (6.1% women and 1.7% men, Census)
- number of adults in HH with children <12 = 114,338 (59,489 x 1.922)
- number of VT children 0 - 4 & 5 - 11 = 32,036 & 54,908 respectively (Dept. of Health, '97)
- national percentage of children 0 - 4 and 5 - 11 in paid, non-parental, non-relative care = 60% & 37% respectively (*Child Care Expenses of America's Families*, Urban Institute, 1997)
- number of VT children <12 in paid, non-parental, non-relative child care = 39,538 (32,036 x 0.60 and 54,908 x 0.37)
- number of HH with children <12 in child care = 27,081 (39,538 ÷ 1.46)
- number of adults with kids <12 in child care = 51,996 (27,081 x 1.92)
- average labor force participation rate = 72.1% (VT DET)
- number of people in the labor force with kids <12 in child care = 37,489 (51,996 x 0.721)

3 The estimated number of people in the labor force with children <12 in child care = 37,489 (see methodology note #1)
- percentage of VT workers in the public sector = 15.98% (DET)
- number of people in the private sector labor force with children <12 in child care = 31,498 (37,489 x 0.8402)
- Column F = 31,498 x Column D (see Table below)
- percentage of people in the private sector labor force with children <12 in child care = 12.22% (31,498 ÷ 257,721; we added 3.5% to the number employed to reflect the private sector portion of the unemployed). Thus, 1 out of every 8.183 people in the labor force. Therefore, assuming even distribution, firms with an average of more than 8 employees are expected to have at least 1 person with a child < 12 in child care. For very small firms (< 5 and 5 - 9 employees), we use the following formula: Column G = Column B ÷ (8.183 ÷ Column E). This means that for firms with an average of 2 employees, every 4th firm will have 1 person with a child <12 in child care. For a variety of reasons, it is unlikely that there would be even distribution, however, so the final estimate of 11,594 firms is likely to be an overstatement. Unfortunately, we have no primary survey data to be more precise.

A	B	C	D	E	F	G
Size of firm (not incl. gov't)	**# of firms**	**# of workers**	**% of workers**	**Avg. # of workers /firm**	**Dist. of workers w/children < 12**	**# of firms w/workers w/children < 12**
< 5	12,766	25,483	10.2%	2.0	3,213	3,114
5 - 9	4,253	29,389	11.8%	6.9	3,717	3,591
10 - 19	2,581	34,942	14.0%	13.5	4,410	2,581
20 - 49	1,548	47,644	19.1%	30.8	6,016	1,548
50 - 99	449	30,932	12.4%	68.9	3,906	449
100 - 249	235	36,137	14.5%	153.8	4,567	235
250 - 499	52	19,746	7.9%	379.7	2,488	52
500 - 999	16	8,670	3.5%	541.9	1,102	16
1000 +	8	16,063	6.5%	2,007.9	2,047	8
Totals	**21,908**	**249,006**	**100%**		**31,478***	**11,594**

Base data on the # of firms and workers by size of firm from DET (2000 ES-202)
* Does not equal the number shown above due to rounding

4 Multiply the avg. VT wage ($28,920, DET, 2000) times the number of people in the labor force with children <12 (we reduced the labor force estimate by 3.5% to account for the unemployed, who are part of the labor force). According to DET, total wages in 2000 were $8.57 billion (not including non-wage income such as interest, dividends, and capital gains).

5 We assumed 39,538 children under 12 in paid non-parental, non-relative care. We further assumed 75% of all care is provided in rural areas and 25% in urban areas. We applied the average cost of care (est. by CCSD) to each ($5,020 rural and $5,953 urban) and arrived at the total.

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